



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

thing in its power towards securing full and accurate observations on this rare and important occasion.

I have, &c.,

(Signed) J. GEOGHEGAN,
Under Secretary to Government of India.

True copy.

J. HERSCHEL, Lieut. R.E.

[Commander Rennoldson's letter, which was sent independently by the Secretary of the Peninsular and Oriental Steam Navigation Company appears below.]

*XI. "Observations of the Total Solar Eclipse of August 18, 1868."

By Captain CHARLES G. PERRINS. Communicated by Prof. STOKES. Received October 30, 1868.

(Abstract.)

These observations are contained in a letter dated "S.S. 'Carnatic,' Suez, 28th August, 1868," addressed to the Managing Directors, Peninsular and Oriental Steam Navigation Company. One of the hand spectroscopes sent out by the Royal Society had been entrusted to Captain Perrins; but as his ship at the time of the eclipse was about 20 miles north of the track of the total phase, he had no opportunity of using it for the observations contemplated. He thus describes the appearance at the time of greatest obscuration:—

"That portion of the sun remaining uneclipsed consisted of a narrow streak (in shape like a crescent) of its upper left limb, in size about $\frac{1}{16}$ part of its diameter. The light emitted from this was of a very peculiar description and difficult to describe, being at the same time extremely brilliant and yet most remarkably pale. The high sea running appeared like huge waves of liquid lead, and the ghastly paleness of the light thrown upon it and all around revealed a scene which, for its weird-like effect, it would be as impossible to depict as it is to describe."

The slender crescent showed in the spectroscope several dark lines, as was to be expected.

XII. "Observations of the Total Solar Eclipse of August 18, 1868."

By Captain D. RENNOLDSON. Communicated by Prof. STOKES. Received October 30, 1868.

(Copy.)

From Captain D. Rennoldson.

"Peninsular and Oriental Company,
Bombay, 22nd August 1868.

"DEAR SIR,—I enclose you a sketch of the eclipse seen on board the

* This and the following three communications were transmitted by the Directors of the Peninsular and Oriental Steam Navigation Company.

'Rangoon' on the morning of the 18th inst. The ship was at that time on the central line, viz. in lat. $15^{\circ} 42' N.$, long. $59^{\circ} 15' E.$

"The total eclipse lasted $4' 8''$. The sketch shows what was seen by a large number of persons. In observing with the spectroscope, I saw what none of the others could see with their glasses, viz. two prominences on the right limb of the moon (showing in the spectroscope to the left) of a yellow flame-colour, immediately opposite to the red ones, the whole forming a square, with the moon in the centre, showing out like a mass of rock. The colour of the corona, as seen through the prism, was red, a yellowish green, blue, and violet,—the violet the brightest till the middle of the eclipse, when the red became lumpy and showed brighter.

"The spectrum from the moon cut through the centre of this, but very faint, the red thrown out with a curve.

"The motion of the ship was so great it was impossible to get minute observations; so much haze and flying cloud, only Venus and one other star could be seen.

"I return the spectroscope, and am only sorry I could not make more use of it.

"I am, &c.,

(Signed)

"D. RENNOLDSON,

"Commander S. S. 'Rangoon.'"

Capt. Henry, Superintendent

P. & O. S. N. C., Bombay.

[This letter was accompanied by four coloured sketches of the prominences and corona. Of these No. 1 shows a small low prominence extending from about azimuth 144° to 150° , azimuths being measured in the direction of the motion of the hands of a watch, round the centre of the moon's disk, from the highest point, and another low prominence from azimuth 160° to 180° . No. 2 shows a lofty prominence at azimuth 198° , curved in the upper part, with the concavity turned in the direction of increasing azimuth, and a low prominence from azimuth 332° to 345° . No. 3 shows the long prominence at azimuth 202° , and the upper prominence at azimuth 320° to 338° . No. 4 shows the long prominence, reduced in height, at azimuth 212° , and the upper prominence at azimuth 230° to 255° . The figures are thus described.]

No. 1. A small red flame or protuberance on the right-hand lower corner of the moon, visible for a few seconds before the sun was totally eclipsed; disappeared a few seconds after.

No. 2. $1\frac{1}{2}^m$ after commencement of total eclipse. A large red flame of about $5'$ of arc on lower left-hand corner, and a red flame or blotch on upper left hand—both visible from commencement of totality, and very bright.

No. 3. 3^m after commencement. The long red flame rather shorter, and the upper one increased in size.

No. 4. At reappearance of sun's upper limb the upper protuberance disappeared; the lower one was visible for about 10^s after, about half its former size.